

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

SHOULDER INNOVATIONS, INC.,	)	
	)	
<i>Plaintiff,</i>	)	C.A. No. 24-266-JPM
	)	
v.	)	<b>JURY TRIAL DEMANDED</b>
	)	
CATALYST ORTHOSCIENCE INC.,	)	
	)	
<i>Defendant.</i>	)	

**DEFENDANT CATALYST ORTHOSCIENCE INC.'S  
AMENDED ANSWER TO AMENDED COMPLAINT AND  
AMENDED COUNTERCLAIMS**

Defendant Catalyst OrthoScience Inc. ("Catalyst"), for its amended answer to the amended complaint of Shoulder Innovations, Inc. ("SI"), states:

**NATURE OF THE ACTION**

1. Catalyst admits that the amended complaint purports to assert a claim for patent infringement, but Catalyst denies any allegation or implication that Catalyst has infringed any valid claim of U.S. Patent Nos. 11,771,561 ("the '561 Patent") or 12,023,254 ("the '254 Patent"). Catalyst denies the remaining allegations of paragraph 1.

**THE PARTIES**

2. Catalyst is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 2 and therefore denies them.

3. Admitted.

**JURISDICTION AND VENUE**

4. Catalyst admits that the amended complaint purports to assert a claim for patent infringement, but Catalyst denies any allegation or implication that Catalyst has infringed any valid claim of the '561 or '254 Patents. Catalyst also admits that district courts have original jurisdiction

of certain civil actions under 28 U.S.C. §§ 1331 and 1338(a). Catalyst denies the remaining allegations of paragraph 4.

5. Catalyst admits that this Court has personal jurisdiction over Catalyst because Catalyst is organized and exists under the laws of the State of Delaware. Catalyst denies the remaining allegations of paragraph 5.

6. Catalyst admits that venue is proper in this judicial district under 28 U.S.C. § 1400(b) because Catalyst is a Delaware corporation. Catalyst denies the remaining allegations of paragraph 6.

### **THE PATENT-IN-SUIT**

7. In response to the allegations of paragraph 7, Catalyst incorporates by reference its foregoing responses as if fully restated herein.

8. Catalyst denies that any of the claims of the '561 Patent are valid. Catalyst is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 8 and therefore denies them.

9. Catalyst is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 9 and therefore denies them.

10. Catalyst denies that any of the claims of the '254 Patent are valid. Catalyst is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 10 and therefore denies them.

11. Catalyst is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 11 and therefore denies them.

**FIRST CLAIM FOR RELIEF**  
**(Alleged Infringement of U.S. Patent No. 11,771,561)**

12. In response to the allegations of paragraph 12, Catalyst incorporates by reference its foregoing responses as if fully restated herein.

13. Denied.

14. Catalyst admits that Exhibit C to the amended complaint purports to be a claim chart. Catalyst denies the remaining allegations of paragraph 14.

15. Denied.

16. Catalyst admits that the amended complaint provides notice of the '561 Patent. Catalyst denies the remaining allegations of paragraph 16. Further answering, Catalyst states that SI made vague allegations of wrongdoing to Catalyst before the '561 Patent issued—including allegations of infringing a patent that SI did not own, thereby violating Fla. Stat. § 501.993—and, in response, Catalyst asked SI to provide specific allegations of wrongdoing; SI ignored Catalyst's request and never responded prior to SI's filing the complaint.

17. Denied.

18. Denied.

19. Denied.

20. Denied.

21. Denied.

22. Denied.

**SECOND CLAIM FOR RELIEF**  
**(Alleged Infringement of U.S. Patent No. 12,023,254)**

23. In response to the allegations of paragraph 23, Catalyst incorporates by reference its foregoing responses as if fully restated herein.

24. Denied.

25. Catalyst admits that Exhibit D to the amended complaint purports to be a claim chart. Catalyst denies the remaining allegations of paragraph 25.

26. Denied.

27. Catalyst admits that the amended complaint provides notice of the '254 Patent, that SI sent Catalyst correspondence on May 21, 2024, and that SI sent Catalyst correspondence on July 8, 2024. Catalyst denies the remaining allegations of paragraph 27.

28. Denied.

29. Denied.

30. Denied.

31. Denied.

32. Denied.

33. Denied.

#### **RESPONSE TO PLAINTIFF'S PRAYER FOR RELIEF**

Catalyst denies that SI is entitled to any of the relief sought in the prayer for relief because Catalyst has not infringed the '561 or '254 Patents and because the asserted claims of the '561 and '254 Patents are invalid. Catalyst therefore denies SI's prayer for relief in its entirety.

#### **AFFIRMATIVE AND OTHER ADDITIONAL DEFENSES**

##### **FIRST DEFENSE**

The amended complaint fails to state a cause of action for which relief can be granted.

##### **SECOND DEFENSE**

Catalyst does not infringe and has not infringed under any theory (including jointly, directly, willfully, contributorily, or by inducement), any valid claim of the '561 or '254 Patents.

### **THIRD DEFENSE**

One or more claims of each of the '561 and '254 Patents are invalid, as discussed in Catalyst's counterclaims below, which are incorporated herein by reference, for failing to comply with the conditions for patentability set forth in 35 U.S.C. § 101, et seq., including but not limited to 35 U.S.C. §§ 101, 102, 103, and/or 112 and the rules, regulations, and laws pertaining thereto.

### **FOURTH DEFENSE**

Under 35 U.S.C. § 287, Catalyst is not liable to SI for any alleged damages that occurred before SI provided actual notice to Catalyst.

### **FIFTH DEFENSE**

SI's attempted enforcement of the '561 and '254 Patents against Catalyst is barred in whole or in part by the equitable doctrines of equitable estoppel, prosecution laches, patent misuse, and/or other equitable doctrines.

### **SIXTH DEFENSE**

Catalyst has engaged in all relevant activities in good faith, thereby precluding SI, even if it prevails, from recovering its reasonable attorneys' fees and/or costs under 35 U.S.C. § 285.

### **SEVENTH DEFENSE**

SI is precluded from asserting infringement under the doctrine of equivalents because any such infringement theory would encompass or "ensnare" the prior art or run afoul of the disclosure-dedication doctrine.

### **RESERVATION OF RIGHTS**

Catalyst reserves the right to assert all additional defenses that may be determined during the course of discovery.

### **AMENDED COUNTERCLAIMS**

Defendant Catalyst, for its amended counterclaims against Plaintiff SI, states:

#### **SUMMARY AND NATURE OF THE CLAIMS**

1. SI's infringement claims against Catalyst are objectively baseless, and SI knew the claims were objectively baseless when SI filed the amended complaint. Most of the below claims therefore relate to SI's sham litigation and the dark cloud over Catalyst created by SI's baseless allegations. Catalyst, though, owns a patent directed to reamers for glenoid arthroplasty, and SI—without permission—has copied Catalyst's patented technology and commercialized it. And so, Catalyst also brings a counterclaim to put an end to SI's infringement.

#### **THE PARTIES, JURISDICTION, AND VENUE**

2. Catalyst is a Delaware corporation with a principal place of business in Naples, Florida.

3. As SI alleges in its amended complaint, SI is a Delaware corporation with a principal place of business in Grand Rapids, Michigan.

4. The below claims for patent infringement and declaratory judgment arise under the patent laws of the United States, Title 35 of the United States Code, 35 U.S.C. § 271 et seq., and under 28 U.S.C. §§ 2201 and 2202.

5. The Court has subject matter jurisdiction at least under 28 U.S.C. §§ 1331, 1338, and 1367.

6. The Court has personal jurisdiction over SI at least because SI is a Delaware corporation, and SI has asserted the '561 and '254 Patents in this jurisdiction against Catalyst in the amended complaint.

7. For at least the same reasons, venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

## **BACKGROUND**

### ***SI's Predatory Misuse of The Patent System against Catalyst***

8. Catalyst and SI are competitors of approximately equal size and are both relatively young U.S. medical device companies focused on the upper extremity orthopedics market, including shoulder arthroplasty.

9. The companies serving the market constitute a small community and know each other well.

10. Indeed, an investor and executive at Catalyst recently left Catalyst and joined SI.

11. Upon information and belief, SI frequently monitors various media sources for news and other information related to the industry and to SI's competitors, including Catalyst.

12. The market also has a small community of investors and financiers.

13. Over the past several years, both companies have been actively securing financing and raising capital through funding rounds. For example, in March 2023, SI announced that it had closed on an oversubscribed \$42 million Series D financing. And, in August 2023, SI announced that it had secured a \$45 million debt facility in partnership with Trinity Capital.

14. With respect to Catalyst, for example, the company raised \$12.3 million in October 2021 in a Series D financing round and \$1.5 million in April 2024 through a Series E - II financing round.

15. On information and belief, SI has been monitoring Catalyst's efforts to secure financing and to raise capital.

16. On May 4, 2023, before SI filed its complaint against Catalyst in this action, before the United States Patent and Trademark Office ("USPTO") issued either of SI's two asserted '561 or '254 Patents, and before SI had any enforceable rights in either patent, SI sent Catalyst a letter

asserting that Catalyst's R1 Reverse Shoulder System infringed a *patent application*. A copy of SI's letter is attached as Exhibit 1.

17. The letter did not identify any claim of the patent application that Catalyst's system allegedly infringed. The letter also did not contain any information to inform Catalyst how the system allegedly infringed anything yet demanded that Catalyst "let [SI] know by May 18, 2023, how you intend to address this matter."

18. In mid-May 2023, Catalyst responded, explaining that the claims of the patent application are not patentable at least because "a wide variety of fastening systems are known in the orthopedic arts," citing multiple examples of prior art that were neither disclosed nor cited during prosecution of the related patent application and noting that "focused patent searching would reveal many more."

19. On July 21, 2023, SI responded, asserting "the Application issued as U.S. Patent No. 11,672,669 on June 13, 2023," asserting that the "R1 Reverse Shoulder System ... now infringe[s] the Patent's issued claims," and demanding that Catalyst "let [SI] know by August 4, 2023 how you intend to address this matter." A copy of this letter is attached as Exhibit 2.

20. On August 4, 2023, counsel for Catalyst responded, indicating that Frost Brown Todd LLP represented Catalyst and that the firm would respond to the July 2023 letter.

21. Despite the representations in SI's July 2023 letter, the application did *not* issue as U.S. Patent No. 11,672,669; rather, as alleged in paragraph 8 of SI's amended complaint, the application would eventually issue, but not until months later, on October 3, 2023, as U.S. Patent No. 11,771,561, the asserted '561 Patent here.



22. Nevertheless, prior to the issuance of either the '561 or '254 Patent, and without any patent protection or legal basis, SI insisted that Catalyst discontinue its R1 Reverse Shoulder System.

23. For example, on August 4, 2023, counsel for SI told Catalyst's counsel that SI was not interested in Catalyst's licensing any intellectual property of SI but rather that SI's intention was to have Catalyst altogether discontinue the R1 Reverse Shoulder System. Again, SI had no legal basis for making this demand.

24. On September 7, 2023, Catalyst wrote SI, explaining that Catalyst was "unable to obtain U.S. Patent No. 11,672,669 from the United States Patent and Trademark Office" and asking SI to "please confirm that U.S. Application No. 18/058,058 indeed issued as U.S. Patent No. 11,672,669 on June 13, 2023," as asserted in SI's July 2023 letter. Catalyst also stated, "we do not understand why you believe that Catalyst may infringe the patent" and asked SI to "[p]lease identify every allegedly infringed claim, and, for each such claim, identify where each claim limitation is found within the R1 System." A copy of this letter is attached as Exhibit 3.

25. SI, however, never responded to the letter.

26. Instead, on February 28, 2024, SI filed a complaint against Catalyst in this action, asserting infringement of the '561 Patent, which, again, issued nearly five months earlier, on October 3, 2023.

27. At the time SI filed its complaint, it was well known to SI and the rest of the industry that Catalyst was actively seeking financing.

28. Various media outlets reported SI's lawsuit against Catalyst, including *Life Sciences Intellectual Property Review*,<sup>1</sup> *Law.com*,<sup>2</sup> and *Bloomberg Law News*.<sup>3</sup> On information and belief, SI filed the complaint intending that third parties would report it online, and SI took steps that ultimately resulted in third parties' reporting SI's allegations against Catalyst.

29. On May 21, 2024, SI again wrote Catalyst, asserting that the USPTO had notified SI that claims of another patent application had been allowed. Although SI at that time merely had a second patent application—not a second patent—the letter likewise asserted that Catalyst's R1 Reverse Shoulder System "infringes one or more claims of the Allowed Patent." The letter—like SI's previous correspondence—did not identify any specific claims of the patent application that Catalyst had allegedly infringed or why SI believed that Catalyst's shoulder system infringed any such claims. This letter is attached as Exhibit 4.

30. The letter also did not demand that Catalyst discontinue its shoulder system. And, despite threatening potential entitlement to "a reasonable royalty for Catalyst's infringement of the Allowed Patent pursuant to 35 U.S.C. § 154(d)," the letter, of course, did not include a copy of any published patent application as required by 35 U.S.C. § 154(d) because the patent application had not yet published.

31. In other words, the letter had absolutely no legal purpose or effect.

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<sup>1</sup> <https://www.lifesciencesipreview.com/biotechnology/medtech-firms-clash-over-reverse-shoulder-surgery-tech>

<sup>2</sup> <https://www.law.com/radar/card/shoulder-innovations-inc-v-catalyst-orthoscience-inc-52512863-1/>

<sup>3</sup> <https://news.bloomberglaw.com/litigation/shoulder-innovations-inc-alleges-prosthetic-patent-infringed>

32. At the time, Catalyst was continuing its efforts to secure financing, and, again, SI knew that Catalyst was involved in such efforts.

33. On information and belief, SI did not send Catalyst the May 2024 letter "as a courtesy" or to provide "prompt notice about a forthcoming patent the plaintiff intends to add to a litigation," as SI now argues (*see* D.I. 54 at 11, 24), but rather for an improper purpose: to start a foreseeable and desired chain reaction, disrupting Catalyst's fundraising efforts and spooking potential investors, doctors, and others in the small community based on unsupported, bald assertions of infringement of a patent application—not an issued patent.

34. That is, on information and belief, SI sent the May 2024 letter to harm competition, not to protect legitimate patent rights, believing, for example, that Catalyst—out of an abundance of caution—would disclose the letter to investors and others as including claims that are potentially "material" under, for example, the Financial Accounting Standards Board Accounting Standards.

35. The patent application referenced in SI's May 2024 letter issued as the asserted '254 Patent on July 2, 2024.

36. Reverse shoulder systems—including the systems disclosed in the '561 and '254 Patents—are not new. And the purported invention of both patents is invalid and unpatentable, failing to meet the requirements of novelty and non-obviousness under 35 U.S.C. §§ 102 and 103, as it merely combines known elements with predictable results, lacking any inventive step that would not be obvious to a person having ordinary skill in the art.

37. As a result, on July 3, 2024, after SI filed the complaint, Catalyst filed a petition for post-grant review of the '561 Patent with the Patent Trial and Appeal Board of the USPTO, a process that allows third parties to challenge the patentability of a granted patent based on prior art and other relevant information. *See* 35 U.S.C. § 321. Attached as Exhibit 5 is a copy of the

petition, which is available on the Patent Trial and Appeal Case Tracking System, located at <https://ptacts.uspto.gov/ptacts/ui/home>.

38. That same day, Catalyst emailed copies of the petition and its exhibits to SI's counsel of record in this action.

39. In the petition, Catalyst seeks review and cancellation of every patent claim of the '561 Patent, based on the following six grounds:

SUMMARY OF GROUNDS	
1.	Claims 1, 3-9, and 11-16 are unpatentable under § 103 as obvious over U.S. Patent No. 10,813,769 ("Orphanos") in view of the knowledge and skill of a POSITA and U.S. Patent No. 9,233,003 ("Roche")
2.	Claims 2 and 10 are unpatentable under § 103 as obvious over Orphanos in view of the knowledge and skill of a POSITA and Roche, and in further view of U.S. Pat. Pub. No. 2022/0125594 ("Frankle")
3.	Claims 1, 3-9, and 11-16 are unpatentable under § 103 as obvious over U.S. Patent No. 11,439,513 ("Lefebvre") in view of Orphanos and Roche
4.	Claims 2 and 10 are unpatentable under § 103 as obvious over Lefebvre in view of Orphanos and Roche, and in further view of Frankle
5.	Claims 1-16 are unpatentable under § 112 because the term "central channel" as used with respect to the baseplate renders the claim indefinite
6.	Claims 1-16 are unpatentable under § 112 because the term "central channel . . . configured to interface with the baseplate" renders the claim indefinite

40. For at least the reasons explained in detail in the petition, every patent claim of the '561 Patent is unpatentable and likewise invalid.

41. SI has known at least as early as October 3, 2023, and no later than July 3, 2024, that SI's claims against Catalyst for alleged infringement of the '561 Patent are objectively baseless at least because the claims of the '561 Patent are invalid and the USPTO erred in issuing the patent.

42. And SI also knew that its claims against Catalyst for alleged infringement of the '**254 Patent**' are objectively baseless at least because the primary difference between the independent claims of the '561 and '254 Patents is the mere substitution of a screw with a post—

an element known to a person of ordinary skill in the art. In other words, for the same reasons that SI knew the claims of the '561 Patent are invalid, SI also knew that the claims of the '254 Patent are invalid, and SI knew its related infringement claims against Catalyst are objectively baseless the moment the patent issued on July 2, 2024, but certainly no later than the next day, when Catalyst provided SI with the petition for post-grant review, which meticulously detailed the multiple grounds for invalidity and unpatentability.

43. Indeed, Catalyst explicitly connected these obvious dots for SI prior to SI's filing the amended complaint. That is, before SI filed its amended complaint, SI indicated via letter that SI intended to amend its complaint to include a claim for infringement of the '254 Patent, and, in response, Catalyst wrote:

Catalyst denies any wrongdoing, and Catalyst disagrees that the letter [regarding amendment of the complaint] provides actual notice of infringement of U.S. Patent No. 12,023,254. For example, as with SI's infringement contentions regarding the '561 Patent, SI's claim chart for the '254 Patent fails to show how the accused "glenosphere central channel" is "configured to interface with the [accused] baseplate."

Moreover, the claims of the '254 Patent, including claim 1, are invalid and therefore cannot be infringed. With respect to claim 1, for example, the only material difference between it and claim 1 of the '561 Patent appears to be the replacement of "central screw" with "central post." As a result, the claim is invalid at least because of grounds 1, 3, 5, and 6 of Catalyst's recent petition for post-grant review, which we provided to you on July 3, 2024.

Catalyst therefore strongly suggests that SI reconsider filing the proposed amended complaint.

A copy of this letter, dated July 12, 2024, is attached as Exhibit 6.

44. Prior to filing the amended complaint, SI also knew that its *infringement* allegations were objectively baseless for both patents.

45. For example, both the '561 and '254 Patents share common claim limitations, which an accused product must have to infringe either patent. One such limitation from claim 1 of both

patents (and present in *every* patent claim asserted against Catalyst) recites that the central channel of the claimed glenosphere is configured to interface with the claimed baseplate, i.e., "*a glenosphere, having* a lateral, convex articular side, a medial side, and *a [] central channel* extending from the convex articular side to the medial side and *configured to interface with the baseplate.*" Independent claims 9 of the '561 Patent and 12 of the '254 Patent contain the same limitation.

46. The alleged "central channel" of Catalyst's accused products, however, is *not* configured to interface with the alleged baseplate—a fact that SI knew before it filed the amended complaint.

47. As a result, SI conceded in a letter dated July 22, 2024, that SI's infringement theory requires that the Court construe the claims in a way where they would not require that the "central channel" of the glenosphere be "configured to interface with the baseplate." Rather, SI's infringement theory requires that the Court construe the claim limitation so that the "glenosphere" *itself* (rather than the "central channel") is "configured to interface with the baseplate." This construction is objectively baseless. Not only does the construction contradict the plain language of the claims, but the construction also lacks any support whatsoever in the patents' specifications or prosecution histories. Without this objectively baseless construction, SI knows that it cannot even allege that Catalyst has infringed claims of either the '561 or '254 Patents. SI's entire infringement suit is therefore objectively baseless.

48. SI nevertheless charged forward and filed its amended complaint in bad faith, knowing both that the asserted claims of the two patents are invalid *and* that Catalyst has not infringed any claims of either patent. In other words, for both reasons, SI knew that its amended complaint was objectively baseless when SI filed it.

***SI's Anticompetitive Motives and Effects***

49. On information and belief, after SI filed its complaint, SI has repeated objectively baseless allegations from the complaint and/or the amended complaint to members of this small community, including medical professionals, customers of the parties, and/or potential customers of the parties, though doing so was not in furtherance of or incidental to the litigation. Such statements include, on information and belief, that Catalyst infringed SI's patents and that Catalyst will be forced to discontinue its R1 Reverse Shoulder System.

50. On information and belief, SI's conduct was intended to raise the specter of this lawsuit at least to persuade customers to abandon Catalyst.

51. This present action is not the first time that SI has sued a competitor. In September 2011, SI sued Ascension Orthopedics, Inc. in this judicial district, Case No. 11-810, for alleged infringement of U.S. Patent No. 8,007,538. As here, the defendant in that case counterclaimed for declaratory judgment of invalidity of the asserted patent. SI eventually dismissed its infringement claims with prejudice.

52. On information and belief, the purpose of SI's conduct was not merely to enforce SI's patent rights or to inform Catalyst and others of those rights.

53. Rather, on information and belief, SI's conduct—including filing patent infringement lawsuits against Catalyst and other competitors of SI, sending Catalyst the pre-suit correspondence, sending Catalyst the May 2024 letter, and filing the amended complaint—was to harm SI's competitors, including Catalyst. That is, SI's conduct was intended at least to cause significant financial strain to Catalyst through substantial legal costs and resource diversion as well as loss of Catalyst's financing opportunities by undermining investor confidence and decreasing the company's valuation.

54. On information and belief, SI's conduct was aimed to damage Catalyst's reputation, negatively impact sales, and create market and customer perception issues, leading to operational disruptions and lowered employee morale.

55. Furthermore, on information and belief, SI's conduct was intended to create a competitive disadvantage for Catalyst by fostering market uncertainty, delaying product development, and causing supply chain issues resulting in suppliers and partners' hesitating to maintain or enter agreements.

56. Overall, on information and belief, SI intended to hinder Catalyst's growth, stability, and overall business prospects, allowing SI to gain control over the market.

57. On information and belief, SI's pre-complaint and post-complaint actions described above have intentionally, foreseeably, and proximately caused and will continue to cause at least (1) Catalyst significant financial strain due to substantial legal costs and resource diversion, and resulting in a loss of financing opportunities; (2) damage to Catalyst's reputation, negatively impacting sales and causing market and customer perception issues; (3) operational disruptions and lowered employee morale; and/or (4) competitive disadvantage due at least to market uncertainty, delayed product development, and/or supply chain issues, all of which collectively hindered Catalyst's growth, stability, and overall business prospects.

58. On information and belief, SI's pre-complaint and post-complaint actions described above have intentionally, foreseeably, and proximately caused (1) customers to abandon Catalyst; (2) customer to delay in working with including Catalyst; and/or (3) Catalyst to inform its potential investors and financiers, leading to loss or delay in securing investment or with worse terms.



59. For example, as a proximate and foreseeable result of SI's actions, at least one third party expressly informed Catalyst that the third party would have provided funding or investment to Catalyst had SI not asserted its patent infringement claims against Catalyst.

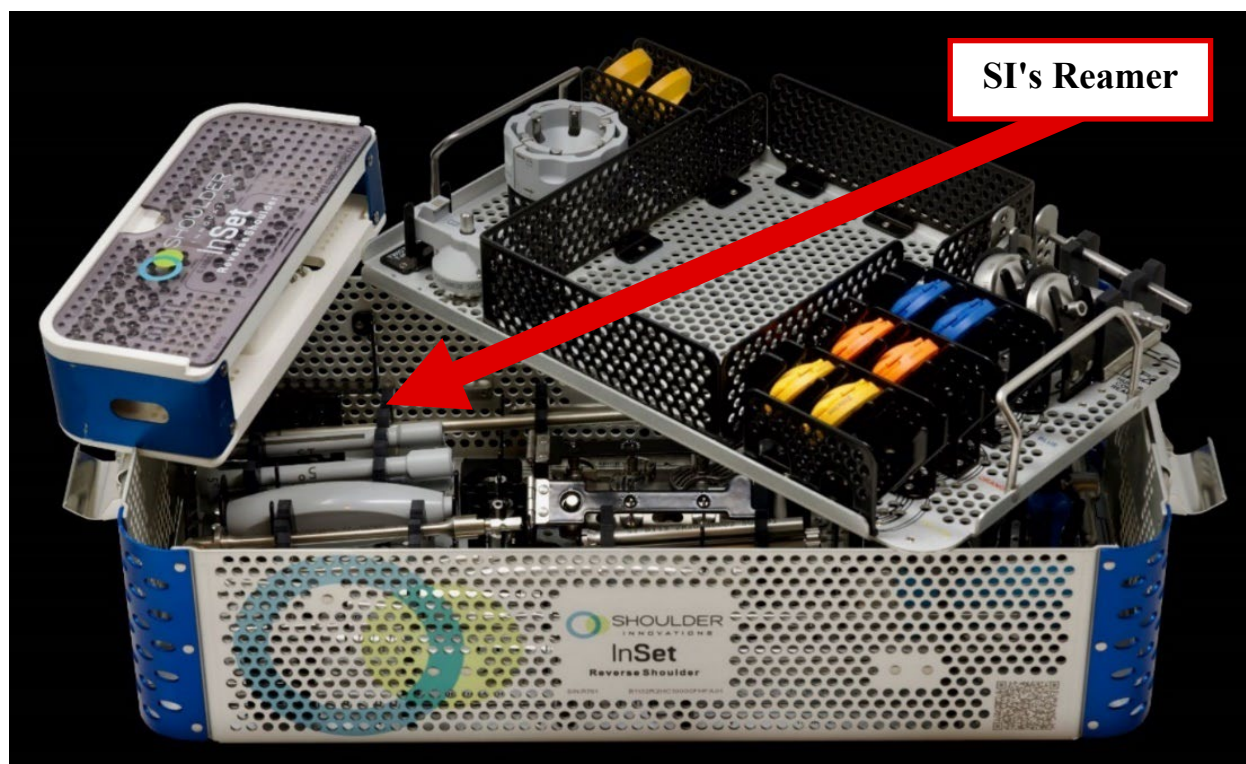
***Catalyst's Patented Reamer and SI's Infringement of Catalyst's Related Patent***

60. Catalyst likewise has patents, but, unlike SI, Catalyst does not attempt to use its patents to unfairly stymie fair competition.

61. For example, Catalyst, by assignment, owns U.S. Patent No. 11,007,063 ("the '063 Patent"), titled "Offset Reamers" and issued on May 18, 2021. Attached as Exhibit 7 is a copy of the '063 Patent.

62. In general, the '063 Patent is directed to improved reamers for glenoid arthroplasty. Reamers are used in various medical procedures to prepare or shape bone surfaces.

63. SI offers a reamer to doctors as part of SI's "InSet Reverse Shoulder System." Below is an image of a kit of instrumentation, including the reamer, provided by SI to doctors:



**FIRST CLAIM FOR RELIEF**  
**(Infringement of U.S. Patent No. 11,007,063)**

64. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

65. SI has directly infringed literally and/or through the doctrine of equivalents at least one claim of the '063 Patent by making, using, selling, offering for sale in the United States, and/or importing into the United States, shoulder systems including but not limited to the "The InSet Reverse Shoulder System" ("SI Accused Product") in violation of 35 U.S.C. § 271(a). SI continues to engage in acts of direct infringement of the '063 Patent.

66. Exhibit 8 shows an exemplary claim chart demonstrating how the SI Accused Product infringes at least claim 19 of the '063 Patent. *See also* Exhibits 9, 10, and 11.

67. By its unauthorized making, using, selling, offering to sell, and/or importing the SI Accused Product, SI has been and still is infringing one or more claims of the '063 Patent, literally or under the doctrine of equivalents.

68. SI has had knowledge of the '063 Patent no later than September 18, 2023.

69. By making, using, selling, offering to sell, and/or importing the SI Accused Product, which SI knows meets each and every limitation of at least claim 19 of the '063 Patent, and by instructing and encouraging customers and users to use the SI Accused Product in an infringing manner, SI is inducing infringement of the '063 Patent in violation of 35 U.S.C. § 271(b).

70. The SI Accused Product provided by SI constitutes a material part of the invention recited in claim 19 of the '063 Patent, which is not a staple article or commodity of commerce suitable for substantial non-infringing use. Moreover, at least as a result of having been put on notice of the '063 Patent, SI knows that the SI Accused Product is especially made or especially adapted for use in a manner that infringes the '063 Patent. Accordingly, SI's commercial uses of

the SI Accused Product contribute to infringement of at least claim 19 of the '063 Patent by its customers in violation of 35 U.S.C. § 271(c).

71. SI has infringed the '063 Patent with full knowledge of the '063 Patent no later than September 18, 2023, and SI's infringement likewise has been, and continues to be, willful, deliberate, and intentional with full knowledge that the SI Accused Product infringes the '063 Patent and that SI's conduct amounted to infringement of the '063 Patent.

72. Catalyst has been damaged by SI's misconduct and is entitled to monetary relief in an amount to be determined at trial.

73. Unless enjoined, SI and others acting on behalf of SI will continue their infringing acts, thereby causing additional irreparable injury to Catalyst for which there is no adequate remedy at law.

**SECOND CLAIM FOR RELIEF**  
**(Declaratory Judgment of Invalidity of the '561 Patent)**

74. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

75. Although omitted from SI's amended complaint, SI's infringement contentions allege that Catalyst has infringed claims 1, 3-9, and 11-16 of the '561 Patent.

76. The '561 Patent asserted by SI against Catalyst—and each of the patent's claims—is invalid under one or more of the conditions for patentability specified in 35 U.S.C. §§ 101, 102, 103, and/or 112.

77. For example, claim 1 of the '561 Patent is invalid under 35 U.S.C. § 103(a) as obvious over at least U.S. Patent No. 10,813,769 ("Orphanos") in view of itself and/or in view of other prior art, including U.S. Patent No. 9,233,003 ("Roche"), because it would have been obvious

to one of ordinary skill in the art at the time of the alleged invention to combine their teachings and each such combination discloses each of the limitations of claim 1.

78. In addition, claim 1 of the '561 Patent is invalid under 35 U.S.C. § 112 at least because "central channel" and "central channel ... configured to interface with the baseplate" fail to inform a person skilled in the art of the scope of the claim with reasonable certainty.

79. There is an actual, substantial, and continuing justiciable controversy between SI and Catalyst regarding the validity of the claims of the '561 Patent, including at least claim 1.

**THIRD CLAIM FOR RELIEF**  
**(Declaratory Judgment of Noninfringement of the '561 Patent)**

80. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

81. Catalyst is not infringing and has not infringed any claims of the '561 Patent as alleged by SI, including claim 1—the only claim identified by SI in the amended complaint as allegedly infringed.

82. For example, Catalyst does not infringe any asserted claims of the '561 Patent at least because the accused product does not have a glenosphere "central channel" that is "configured to interface with the [accused] baseplate."

83. Moreover, claims of the '561 Patent, including claim 1, are invalid and therefore cannot be infringed.

84. There is an actual, substantial, and continuing justiciable controversy between SI and Catalyst regarding the alleged infringement of the '561 Patent.

85. SI knows or should know that Catalyst has not in any way infringed and is not in any way infringing the '561 Patent. This case is thus an exceptional case entitling Catalyst to an award of its attorneys' fees under 35 U.S.C. § 285.

**FOURTH CLAIM FOR RELIEF**  
**(Declaratory Judgment of Invalidity of the '254 Patent)**

86. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

87. Although omitted from SI's amended complaint, SI's infringement contentions allege that Catalyst has infringed claims 1-6, 10, 12-17, and 21 of the '254 Patent.

88. The '254 Patent asserted by SI against Catalyst—and each of the patent's claims—is invalid under one or more of the conditions for patentability specified in 35 U.S.C. §§ 101, 102, 103, and/or 112.

89. For example, claim 1 of the '254 Patent is invalid under 35 U.S.C. § 103(a) as obvious over at least Orphanos in view of itself and/or in view of other prior art, including Roche, because it would have been obvious to one of ordinary skill in the art at the time of the alleged invention to combine their teachings and each such combination discloses each of the limitations of claim 1.

90. In addition, at least claim 1 of the '254 Patent is invalid under 35 U.S.C. § 112 at least because "central channel" and "central channel ... configured to interface with the baseplate" fail to inform a person skilled in the art of the scope of the claim with reasonable certainty.

91. There is an actual, substantial, and continuing justiciable controversy between SI and Catalyst regarding the validity of the claims of the '254 Patent, including at least claim 1.

**FIFTH CLAIM FOR RELIEF**  
**(Declaratory Judgment of Noninfringement of the '254 Patent)**

92. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

93. Catalyst is not infringing and has not infringed any claims of the '254 Patent as alleged by SI, including claim 1—the only claim identified by SI in the amended complaint as allegedly infringed.

94. For example, Catalyst does not infringe any asserted claims of the '254 Patent at least because the accused product does not have a glenosphere "central channel" that is "configured to interface with the [accused] baseplate."

95. Moreover, claims of the '254 Patent, including claim 1, are invalid and therefore cannot be infringed.

96. There is an actual, substantial, and continuing justiciable controversy between SI and Catalyst regarding the alleged infringement of the '254 Patent.

97. SI knows or should know that Catalyst has not in any way infringed and is not in any way infringing the '254 Patent. This case is thus an exceptional case entitling Catalyst to an award of its attorneys' fees under 35 U.S.C. § 285.

**SIXTH CLAIM FOR RELIEF**  
**(Sham Litigation)**

98. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

99. SI's infringement claims against Catalyst in this action are objectively baseless, and SI knew the claims were objectively baseless when SI filed the amended complaint.

100. SI's lawsuit against Catalyst is a mere sham to cover what is nothing more than an attempt to interfere directly with business relationships of Catalyst, a competitor.

101. Catalyst has been damaged by SI's misconduct and is entitled to monetary relief in an amount to be determined at trial.

**SEVENTH CLAIM FOR RELIEF**  
**(Tortious Interference with Prospective Economic Advantage)**

102. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

103. Catalyst's probability for each of the multiple business opportunities described above was reasonable.

104. SI intentionally interfered with one or more of these business opportunities, proximately resulting in loss or significant damage to each such opportunity.

105. Catalyst has been damaged by SI's misconduct and is entitled to monetary relief in an amount to be determined at trial.

**EIGHTH CLAIM FOR RELIEF**  
**(Abuse of Process)**

106. Catalyst incorporates the foregoing paragraphs by reference as though fully set forth herein.

107. SI's various actions described above were not proper in the normal course of legal proceedings.

108. Indeed, SI has abused the legal process, using it to harm Catalyst rather than resolve a legitimate patent dispute.

109. Catalyst has been damaged by SI's misconduct and is entitled to monetary relief in an amount to be determined at trial.

**PRAYER FOR RELIEF**

WHEREFORE, Catalyst requests a judgment:

A. Adjudging that SI has infringed one or more claims of the '063 Patent;

B. Preliminarily and permanently enjoining SI, its officers, agents, suppliers, distributors, servants, employees, successors, assigns, and all persons acting in concert or participation with SI from continuing acts of infringement of the '063 Patent;

C. Awarding Catalyst damages attributable to SI's infringement of the '063 Patent, including at least a reasonable royalty, together with pre-judgment and post-judgment interest;

D. Declaring that Catalyst does not infringe any claim of the '561 or '254 Patents;

E. Declaring that the claims of the '561 and '254 Patents are invalid;

F. Awarding Catalyst damages attributable to SI's other misconduct, together with pre-judgment and post-judgment interest;

G. Declaring that Catalyst is not liable in any way for the relief sought in the amended complaint, denying SI all such relief, and dismissing the amended complaint with prejudice;

H. Declaring that this case is an exceptional case under 35 U.S.C. § 285;

I. Entering a judgment awarding Catalyst its costs and attorneys' fees; and

J. Awarding such other and further relief as the Court deems equitable and just.



**DEMAND FOR JURY TRIAL**

Defendant Catalyst demands a trial by jury for all issues so triable.

Dated: August 29, 2024

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